A KEY TO THE NORTH AMERICAN MEMBERS OF THE GENUS ANTHOCORIS FALLEN

(Hemiptera: Anthocoridae)

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The writer is at present engaged in a study of the ecology and systematics of the genus *Anthocoris*. During a visit to North America in 1955 an opportunity was taken to study the species occurring there. Shortage of time, due to the peripatetic nature of the visit and to pressure of other work, necessitated that the study be restricted to research of a purely systematic nature.

A search through the literature soon revealed that what had been published about the North American members of this genus was of rather small volume and widely scattered in a variety of journals. The examination of collections in museums in Canada and the United States also revealed a disappointingly meagre number of specimens. So far as can be ascertained, it would appear that, since Reuter's Monograph was published in 1885, no one has published a key to the North American species of the genus *Anthocoris*.

The impression formed, from numerous collecting excursions and from conversations with experienced Hemipterists, is that *Anthocoris* species are somewhat uncommon insects in North America, or, at best, can be described as locally common. It is certain that, from a similar amount of collecting done in Britain, many more specimens would have been obtained than were forthcoming in America.

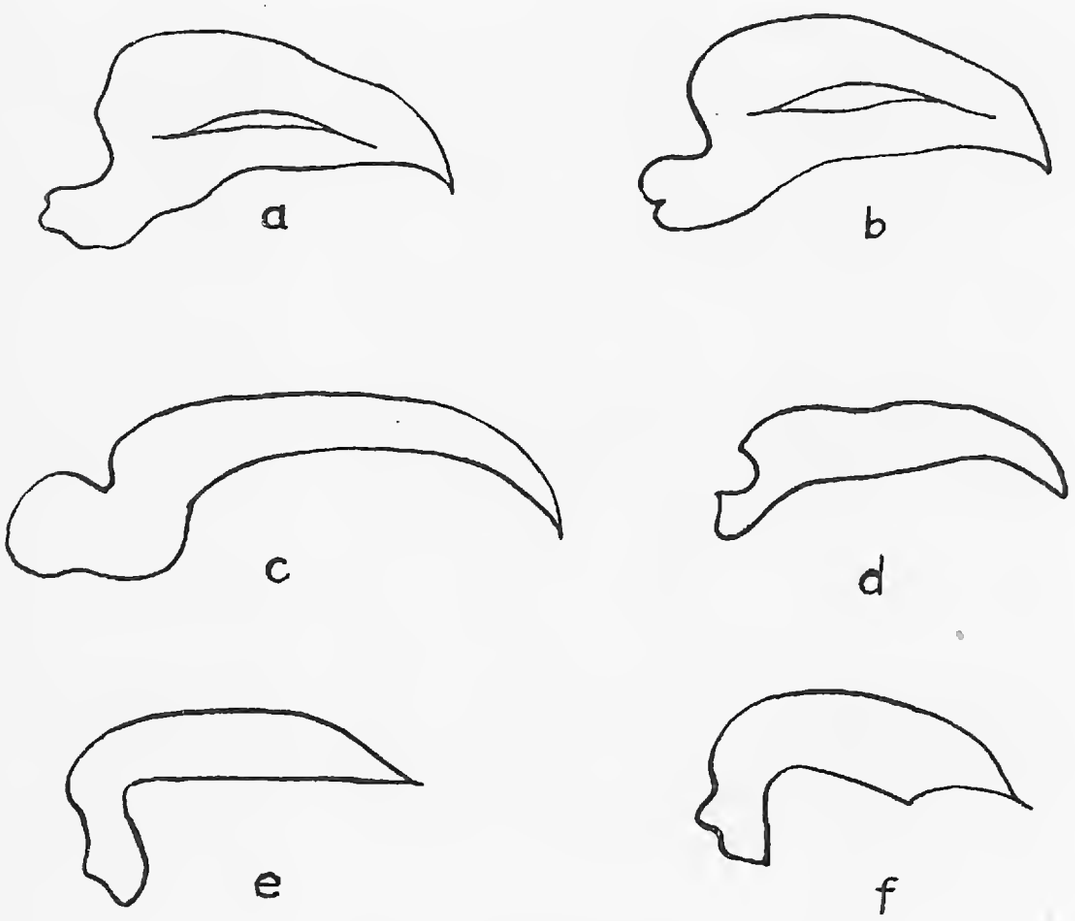
The present paper is a preliminary report on the Canadian and United States members of the genus which number eleven. A key has been constructed which should satisfactorily separate the species. At first some difficulty may be experienced in determining the relative degrees of shininess of the different regions of the hemielytra but, with a carefully adjusted source of illumination and a little practice these difficulties are soon overcome.

Preparations were made of the left parameres of males of as many species as were available, and these are of assistance, not only in separating species from each other, but also in indicating that the species tend to fall into the following three groups:

Group 1, *A antevolens, A. musculus;* Group 2, *A. bakeri, A. melanoceros;* Group 3, *A. whitei, A. albiger.*

A. bakeri and *A. melanoceros* have been placed together tentatively; they do not, however, form such a well-defined group as do the others. Unfortunately no males of *A. dimidiatus, fulvipennis, nigripes, variipes* or *tristis* were available in any of the museum collection examined nor were they obtained during collecting excursions.

The two species *A. antevolens* (White) and *A. musculus* (Say) comprising Group 1, very closely resemble each other in external form and color and in the shape of the left parameres of the males. They differ, however, in the degree of hirsuteness of the hemielytra—a feature which can be discerned under a binocular microscope—and perhaps also in their geographical distribution. So far as can be judged from our present (and admittedly scanty) knowledge of the latter, both appear to be fairly widely distri-



EXPLANATION OF FIGURES

Fig. 1, Left parameres of males of (a) *Anthocoris musculus,* (b) *A. antevolens,* (c) *A. bakeri,* (d) *A. melanoceros,* (e) *A. whitei,* (f) *albiger.*

buted in the United States and Canada with *A. musculus* more common in the east while *A. antevolens* seems to predominate in the west. That the two species are closely related cannot be doubted. The question, however, arises as to whether in fact they are two species. In order to solve this problem, it is important that large numbers of specimens of both species from numerous localities be carefully examined and if possible cross-breeding experiments be performed. The writer will be extremely grateful if North American entomologists will send him any specimens of either or both of these species for further study. The breeding experiments will naturally be possible only in the United States and Canada. It is hoped that the key for the identification of the North American *Anthocoris* species will stimulate American and Canadian entomologists to search further for these rather obscure but interesting insects. A further paper giving a more detailed account of these species is now in preparation.

KEY TO THE SPECIES

1. Hemielytra entirely shining 2
– Hemielytra dull, at least in part 4
2. Large robust species, length 3.7–4.6 mm.; antennae and pronotum entirely black; legs dark ferruginous to piceous; pale testaceous spot usually visible at the inner angle of the cuneus. Left paramere of male blade-like and curved abruptly at the tip. (Fig. 1d) ..... *A. melanoceros* Reuter
– Smaller, length 3.3–4.5 mm.; antenae and pronotum usually not entirely black 3
3. Hemielytra with a very distinct pubescence; left paramere of male broad and beak-shaped (Fig. 1b); hairs of cuneus distinctly longer than distance between their origins; length 3.35–3.73 mm. ..... *A. antevolens* White
– Pubescence on hemielytra not distinct; left paramere of male broad and beak-shaped (Fig. 1a); hairs on cuneus not or little longer than distance between them; length 3.4–3.7 mm. ..... *A. musculus* (Say) (=*A. borealis* Dallas)
4. Clavus and corium entirely dull 5
– Corium shining, at least in part 8
5. Antennae slender and long—as long as the head, pronotum and scutellum as far as the transverse depression; length 3 mm. Head long in proportion to thorax, 18:13. Antennal segment 2 light in color, darkening distally; segments 1, 3 and 4 darker ..... *A. dimidiatus* Van Duzee
– Antennae not so long in proportion 6
6. Membrane pale with a fuscous patch in center; pubescence on hemielytra glittering golden, length 2.75 mm. ..... *A. fulvipennis* Reuter
– Membrane uniformly smoky or fuscous, or at most with basal margin only, pale 7

7. Femora and tibiae black; base of antennal joint 3 ferruginous; pubescence on hemielytra glittering silver; length 3.7–4.1 mm. ..... *A. nigripes* Reuter

– Femora pale at apex, tibiae more or less pale, antennal joint 2 in great part pale; length 3–3.5 mm ..... *A. variipes* Champion

8. Large species, length 4.5 mm.; antennae and legs piceous; antennae short, scarcely longer than width of pronotum at base ..... *A. tristis* Van Duzee

– Smaller species 9

9. Membrane dark with two lateral transverse white bars which in some specimens meet, forming a white transverse band. Left paramere of male blade-like and evenly curved (Fig. 1c); length 2.8–3.7 mm. ..... *A. bakeri* Poppius (=*A. b.* var. *ornatus* Van Duzee)

– No lateral white bars or white transverse band on membrane 10

10. Corium shining only at distal apex. Ratio total length of insect/length of head + pronotum = 3.12; legs, antennae and rostrum entirely black or pitchy. Left paramere scimitar-like (Fig. 1f) ..... *A. albiger* Reuter

– Corium more extensively shining, dull zone mainly confined to the region near the junction of the clavus and corium. Legs partly ferruginous, antennae rarely entirely black. Ratio total length of insect/length of head + pronotum 3.54. Left paramere *broad* and blade-shaped (Fig. 1e) ..... *A. whitei* Reuter

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